Ageing simulation for promoting empathy in medical students

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INTRODUCTION

Elderly patients have complex health needs and are vulnerable to inadequate or undignified treatment.[1] Fostering professional and altruistic attitudes in medical education is necessary in order to prepare medical students for care of older patients.[2] This paper describes a low-fidelity simulation session designed to increase empathy towards elderly patients among University of Edinburgh medical students. The session aims to enhance understanding of effects of age-related physical impairments on activities of daily living; how these impairments may challenge good clinical care and stimulate discussion about how these challenges may be mitigated. The session has been integrated into the Medicine of the Elderly teaching programme and here we describe it as delivered in NHS Fife, where the session has expanded to include a commercial age simulation suit[3] to further enhance the learning experience.

METHODS

The 90 min session accommodates six medical students and is facilitated by two tutors in the Education Centre, Victoria Hospital, Kirkcaldy. Initially, the students are introduced to the aims during a 10 min briefing, and safety aspects are discussed. The students are divided into groups: the first focus on mobility; the second on special senses, before switching over after 30 min. Finally, there is a 20 min debrief. The students are supervised at all times.

Mobility

Each student has the opportunity to wear the simulation suit, consisting of a weighted vest, soft collar, straps and overshoes (see figure 1). The student is dressed in the components over her/his own attire by the other group members before carrying out tasks around the education centre: getting from seated to standing position; typing a sentence; walking a circuitous route around the centre; filling a plastic cup with water; ascending and descending stairs. The suit limits joint movement at the knees, ankles, elbows, wrists and neck which simulates reduced mobility and makes these straightforward tasks difficult. The other group members assist when necessary, acting as 'carers' for the 'older person'. The tutor films the student moving in the suit and, after the suit is removed, the student watches the video in order to appreciate how their gait and posture changed. The movie file is then deleted, and the process is repeated with the next student. Throughout, the students are invited to reflect on the experience of being limited in physical function, relying on others for help (eg, for dressing), and potentially being seen by others around them as slow and vulnerable.

Special senses

The students carry out tasks while using easily sourced or hand-made props applied to the body to simulate common age-related impairments. For each, students suggest measures to alleviate these

Figure 1 The age simulation suit is worn over the student's own attire and includes straps, a soft collar and weighted vest which restrict movement in order to simulate the limited mobility associated with old age.

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Figure 2 Reading glasses are altered with cardboard and cellophane in order to simulate age-related visual impairments while medical students attempt to read clinical information.

difficulties in the clinical setting, and practical ways in which empathy can be integrated into clinical care:

- *Vision*—Reading medication information while wearing spectacles altered with cards or cellophane to simulate homonymous hemianopia, cataracts, diabetic retinopathy and age-related macular degeneration (see figure 2). This highlights the difficulty in assimilating all key clinical information for visually impaired older patients, and the value of providing information in other formats, for example, audio recordings or large print.
- *Hearing*—Attempting to replicate an intricate diagram based on a verbal description while wearing ear plugs and background noise is played. This emphasises the importance of optimising environmental factors when communicating important—often complex—information to patients with hearing impairments. This may include minimising other noise as much as possible, being positioned close to the patient where the speaker's lips can be seen, and using family members to help convey information.
- *Tactile sensation*—Removing sweets from a dosette box while wearing rubber gloves with tape wrapped around the fingers to simulate handling medications with reduced tactile sensitivity and manual dexterity. This promotes awareness of factors other than clinical indication which should be considered when prescribing medications in the elderly, for example, ability to physically manage tablets, polypharmacy. This leads to discussion of rationalising clinical need with medication load in older patients.

Debrief

During the debrief, students are asked how they perceived the simulation, and how their practice may be altered by the experience. There is no formal assessment of the learning from the session, but the debrief allows for exploration of the students' understanding of age-related physical impairments, and to check that the intended messages have been heard.[4] So far we have been reassured by contributions to discussion that have indicated a more empathetic attitude to older patients. For example, some suggest they will spend longer with hearing or visually impaired patients to ensure they have assimilated clinical information, even returning to see a patient after a busy ward round. The debrief also encourages discussion of the advantages of being older and ensures students are aware that many healthy older people do not suffer from frailty or disability.

DISCUSSION

Our ageing simulation session benefits from the simplicity and low cost of most materials and can easily be replicated across hospitals. The commercial simulation suit presented an initial expense; however, it is durable, has low maintenance requirements and more effectively simulates motor impairments than other available resources. While significant tutor time is required, we believe this is an investment as we are providing learning applicable to care of older patients across specialities.

Although there have been attempts to measure outcomes from other geriatric teaching interventions, results about empathy building are conflicting.[5] It is important to consider if our aim of promoting empathetic practice for elderly patients is being fulfilled, however we have not yet formally investigated changes in practice. This is difficult to measure quantitatively, and we are considering a qualitative means of evaluating our session, for example, ward-based observations.

In conclusion, this ageing simulation session has been developed to promote empathy in medical students towards older patients. Despite its limitations, we believe the session is succeeding in leading students to consider the older patient's perspective, and look forward to refining our work to more effectively teach empathy and reflect best practice in simulation.

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Contributors SQ is the lead tutor for the ageing simulation sessions at Victoria Hospital, Kirkcaldy. The lesson concept and aims were passed on to him by HJ but he has subsequently developed the session more fully. The paper describes the simulation session as it has now been developed and designed by SQ for medical students attached to Medicine for the Elderly in Kirkcaldy. SQ was the principal

author of this paper. HJ facilitated the ageing simulation session at Victoria Hospital, Kirkcaldy, prior to SQ, but not in the format described in this paper. HJ handed the project over to SQ. HJ has provided input into the writing of this paper. JA has been assisting SQ in the facilitating of these teaching sessions in Kirkcaldy. JA is in charge of maintaining the simulation suit described in the paper, and during the sessions principally assists with the 'Mobility' section. OAO is the module organiser for the final year University of Edinburgh students who are attached to Medicine of the Elderly and has had general oversight over this teaching project. OAO originally suggested running the simulation teaching session to HJ. OAO recommended writing a publication about the ageing simulation session. OAO has offered edits to this paper during re-drafting and also suggested keywords.

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